

ABSTRACT

An electrical device operating on the principle of induction, such as a transformer. The device employs High Temperature Superconductors to build pancake coils having a very low height to diameter ratio. These pancake coils are placed around ferromagnetic core legs as in a conventional transformer. In multiphase applications, the low height to diameter ratio of the pancake coils causes the transformer to become quite wide. The present invention proposes overlapping the adjacent pancake coils in a multiphase induction device to reduce the width. A specific example of a 3-phase power transformer is presented.